

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/560,961
Source: IFWP
Date Processed by STIC: 12/30/2005

ENTERED



IFWP

RAW SEQUENCE LISTING

DATE: 12/30/2005

PATENT APPLICATION: US/10/560,961

TIME: 09:43:13

Input Set : A:\15450PCT00.ST25.txt

Output Set: N:\CRF4\12302005\J560961.raw

```

3 <110> APPLICANT: Pharmexa A/S
5 <120> TITLE OF INVENTION: PURIFICATION OF HER-2 VARIANTS
7 <130> FILE REFERENCE: P1020DK00
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/560,961
C--> 9 <141> CURRENT FILING DATE: 2005-12-14
9 <160> NUMBER OF SEQ ID NOS: 2
11 <170> SOFTWARE: PatentIn version 3.2
13 <210> SEQ ID NO: 1
14 <211> LENGTH: 5661
15 <212> TYPE: DNA
16 <213> ORGANISM: Artificial sequence
18 <220> FEATURE:
19 <223> OTHER INFORMATION: Recombinant expression plasmid derived from pMT
22 <220> FEATURE:
23 <221> NAME/KEY: polyA_signal
24 <222> LOCATION: (263)..(268)
25 <223> OTHER INFORMATION: SV40 late polyadenylation site
27 <220> FEATURE:
28 <221> NAME/KEY: misc_feature
29 <222> LOCATION: (1579)..(2439)
30 <223> OTHER INFORMATION: Ampicillin resistance gene, encoded by complementary strand
32 <220> FEATURE:
33 <221> NAME/KEY: promoter
34 <222> LOCATION: (3050)..(3415)
35 <223> OTHER INFORMATION: Metallothionein promoter
37 <220> FEATURE:
38 <221> NAME/KEY: RBS
39 <222> LOCATION: (3493)..(3501)
40 <223> OTHER INFORMATION: Kozak-like sequence
42 <220> FEATURE:
43 <221> NAME/KEY: CDS
44 <222> LOCATION: (3502)..(5592)
45 <223> OTHER INFORMATION: DNA encoding immunogenic, his-tagged variant of human HER-2
47 <220> FEATURE:
48 <221> NAME/KEY: sig_peptide
49 <222> LOCATION: (3502)..(3555)
50 <223> OTHER INFORMATION: BiP signal sequence
52 <220> FEATURE:
53 <221> NAME/KEY: misc_feature
54 <222> LOCATION: (3556)..(3597)
55 <223> OTHER INFORMATION: Histidine tag
57 <220> FEATURE:
58 <221> NAME/KEY: mat_peptide

```

RAW SEQUENCE LISTING

DATE: 12/30/2005

PATENT APPLICATION: US/10/560,961

TIME: 09:43:13

Input Set : A:\15450PCT00.ST25.txt

Output Set: N:\CRF4\12302005\J560961.raw

```

59 <222> LOCATION: (3556)..(5589)
61 <220> FEATURE:
62 <221> NAME/KEY: misc_feature
63 <222> LOCATION: (3598)..(3603)
64 <223> OTHER INFORMATION: Dipeptidase stop sequence
66 <220> FEATURE:
67 <221> NAME/KEY: misc_feature
68 <222> LOCATION: (3604)..(5589)
69 <223> OTHER INFORMATION: Gene coding for the hHER2MA5-5DUH protein
71 <220> FEATURE:
72 <221> NAME/KEY: misc_feature
73 <222> LOCATION: (4357)..(4401)
74 <223> OTHER INFORMATION: Diphtheria toxoid P2 epitope
76 <220> FEATURE:
77 <221> NAME/KEY: misc_feature
78 <222> LOCATION: (5500)..(5562)
79 <223> OTHER INFORMATION: Diphtheria toxoid P30 epitope
81 <400> SEQUENCE: 1
82 ggccgctcga gtctagaggg cccttcgaag gtaagcctat ccctaaccct ctctcgggtc 60
84 tcgattctac gcgtaccggt catcatcacc atcaccattg agtttaaacc cgctgatcag 120
86 cctcgactgt gccttctaag atccagacat gataagatac attgatgagt ttggacaaac 180
88 cacaactaga atgcagtga aaaaatgctt tatttgtgaa atttgtgatg ctattgcttt 240
90 atttgttaacc attataagct gcaataaaca agttaacaac aacaattgca ttcattttat 300
92 gtttcagggt cagggggagg tgtgggagg tttttaaac aagtaaaacc tctacaaatg 360
94 tggataggct gattatgatc agtcgacctg caggcatgca agcttggcgt aatcatggtc 420
96 atagctgttt cctgtgtgaa attgttatcc gctcacaatt ccacacaaca tacgagccgg 480
98 aagcataaag tgtaaagcct ggggtgccta atgagtgaac taactcacat taattgcgtt 540
100 gcgctcactg cccgctttcc agtcgggaaa cctgtcgtgc cagctgcatt aatgaatcgg 600
102 ccaacgcgcg gggagaggcg gtttgcgtat tgggcgctct tccgcttcct cgctcactga 660
104 ctgcgtgcgc tcggtcgttc ggcgtcggcg agcgggtatca gctcactcaa aggcggtaat 720
106 acgggttatcc acagaatcag gggataacgc aggaaagaac atgtgagcaa aaggccagca 780
108 aaaggccagg aaccgtaaaa aggcgcggtt gctggcgctt ttccataggc tccgcccccc 840
110 tgacgagcat cacaaaaatc gacgctcaag tcagagggtg cgaaacccga caggactata 900
112 aagataccag gcgtttcccc ctggaagctc cctcgtgcgc tctcctgttc cgaccctgcc 960
114 gcttaccgga tacctgtccg cctttctccc ttcgggaagc gtggcgcttt ctcatagctc 1020
116 acgctgtagg tatctcagtt cgggtgtagg cgttcgctcc aagctgggct gtgtgcacga 1080
118 acccccgtt cagcccagcc gctgcgcctt atccggtaac tatcgtcttg agtccaaccc 1140
120 ggtaagacac gacttatcgc cactggcagc agccactggt aacaggatta gcagagcgag 1200
122 gtatgtaggc ggtgtctacag agttcttgaa gtgggtggcct aactacggct acactagaag 1260
124 gacagtattt ggtatctgcg ctctgctgaa gccagttacc ttcggaaaaa gagttggtag 1320
126 ctcttgatcc ggcaaacaaa ccaccgctgg tagcgggtgg ttttttgttt gcaagcagca 1380
128 gattacgcgc agaaaaaaag gatctcaaga agatcctttg atcttttcta cggggtctga 1440
130 cgctcagtgg aacgaaaact cacgttaagg gatttttggtc atgagattat caaaaaggat 1500
132 cttcacctag atccttttaa attaaaaatg aagttttaaa tcaatctaaa gtatatatga 1560
134 gtaaacttgg tctgacagtt accaatgctt aatcagtga gacacctatc cagcgatctg 1620
136 tctatttcgt tcattccatg ttgcctgact ccccgctgta tagataacta cgatacggga 1680
138 gggccttaca tctggcccca gtgctgcaat gataccgcga gacccacgct caccgggtcc 1740
140 agatttatca gcaataaacc agccagccgg aagggccgag cgcagaagtg gtcctgcaac 1800
142 ttatccgcc tccatccagt ctattaattg ttgccgggaa gctagagtaa gtagttcgcc 1860

```

RAW SEQUENCE LISTING

DATE: 12/30/2005

PATENT APPLICATION: US/10/560,961

TIME: 09:43:13

Input Set : A:\15450PCT00.ST25.txt

Output Set: N:\CRF4\12302005\J560961.raw

```

144 agttaatagt ttgcgcaacg ttgttgccat tgctacaggc atcgtggtgt cacgctcgtc 1920
146 gtttggtatg gcttcattca gctccggttc ccaacgatca aggcgagtta catgatcccc 1980
148 catgttggtgc aaaaaagcgg ttagctcctt cggtcctccg atcgttggtca gaagtaagtt 2040
150 ggccgcagtg ttatcactca tggttatggc agcactgcat aattctctta ctgtcatgcc 2100
152 atccgtaaga tgcttttctg tgactgggtga gtactcaacc aagtcattct gagaatagtg 2160
154 tatgcggcga ccgagttgct cttgcccggc gtcaatacgg gataataccg cgccacatag 2220
156 cagaacttta aaagtgtca tcattggaaa acgttcttcg gggcgaaaaac tctcaaggat 2280
158 cttaccgctg ttgagatcca gttcgatgta acccactcgt gcacccaact gatcttcagc 2340
160 atcttttact ttcaccagcg tttctgggtg agcaaaaaaca ggaaggcaaa atgccgcaaa 2400
162 aaagggaata agggcgacac ggaaatgttg aatactcata ctcttccttt ttcaatatta 2460
164 ttgaagcatt tatcagggtt attgtctcat gaggcgatag atatttgaat gtatttagaa 2520
166 aaataaacia ataggggttc cgcgcacatt tccccgaaaa gtgccacctg acgtctaaga 2580
168 aaccattatt atcatgacat taacctataa aaataggcgt atcacgaggc cctttcgttc 2640
170 gcgcgtttcg gtgatgacgg tgaaaacctc tgacacatgc agctcccggg gacgggtcaca 2700
172 gcttgctctg aagcggatgc cgggagcaga caagcccgtc agggcgcgtc agcgggtgtt 2760
174 ggcgggtgtc ggggctggct taactatgcg gcatcagagc agattgtact gagagtgcac 2820
176 catatgcggt gtgaaatacc gcacagatgc gtaaggagaa aataccgcat caggcgccat 2880
178 tcgccattca ggctgcgcaa ctgttgggaa gggcgatcgg tcggggcctc ttcgctatta 2940
180 cgccagctgg cgaaaggggg atgtgtgca aggcgattaa gttgggtaac gccagggttt 3000
182 tcccagtcac gacgttgtaa aacgacggcc agtgccagtg aattaattcg ttgcaggaca 3060
184 ggatgtggtg cccgatgtga ctagctcttt gctgcaggcc gtccatcct ctggttccga 3120
186 taagagaccc agaactccgg cccccaccg cccaccgcca ccccatata tatgtggtac 3180
188 gcaagtaaga gtgcctgcgc atgccccatg tgccccacca agagttttgc atcccatata 3240
190 agtcccaaaa gtggagaacc gaaccaattc ttcgcgggca gaacaaaagc ttctgcacac 3300
192 gtctccactc gaatttggag ccggccggcg tgtgcaaaag aggtgaatcg aacgaaagac 3360
194 ccgtgtgtaa agccgcgttt ccaaaatgta taaaaccgag agcatctggc caatgtgcat 3420
196 cagttgtggt cagcagcaaa atcaagtga tcatctcagt gcaactaaag gggggatcta 3480
198 gatcggggta ccaaagtcac c atg aag ttg tgc atc ttg ctg gcc gtc gtg 3531
199 Met Lys Leu Cys Ile Leu Leu Ala Val Val
200 -15 -10
202 gcc ttc gtg ggc ctg tgc ctg ggc atg aag cac caa cac caa cat caa 3579
203 Ala Phe Val Gly Leu Ser Leu Gly Met Lys His Gln His Gln His Gln
204 -5 -1 1 5
206 cat caa cat caa cat caa gcc ccc tcc acc caa gtg tgt acc ggc aca 3627
207 His Gln His Gln His Gln Ala Pro Ser Thr Gln Val Cys Thr Gly Thr
208 10 15 20
210 gac atg aag ctg cgg ctc cct gcc agt ccc gag acc cac ctg gac atg 3675
211 Asp Met Lys Leu Arg Leu Pro Ala Ser Pro Glu Thr His Leu Asp Met
212 25 30 35 40
214 ctc cgc cac ctc tac cag ggc tgc cag gtg gtg cag gga aac ctg gaa 3723
215 Leu Arg His Leu Tyr Gln Gly Cys Gln Val Val Gln Gly Asn Leu Glu
216 45 50 55
218 ctc acc tac ctg ccc acc aat gcc agc tta agt ttc ctg cag gat atc 3771
219 Leu Thr Tyr Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln Asp Ile
220 60 65 70
222 cag gag gtg cag ggc tac gtg ctc atc gct cac aac caa gtg agg cag 3819
223 Gln Glu Val Gln Gly Tyr Val Leu Ile Ala His Asn Gln Val Arg Gln
224 75 80 85
226 gtc cca ctg cag agg ctg cgg att gtg cga ggc acc cag ctc ttt gag 3867

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/560,961

DATE: 12/30/2005

TIME: 09:43:13

Input Set : A:\15450PCT00.ST25.txt

Output Set: N:\CRF4\12302005\J560961.raw

227	Val	Pro	Leu	Gln	Arg	Leu	Arg	Ile	Val	Arg	Gly	Thr	Gln	Leu	Phe	Glu	
228		90					95					100					
230	gac	aac	tat	gcc	ctg	gcc	gtg	cta	gac	aat	gga	gac	ccg	ctg	aac	aat	3915
231	Asp	Asn	Tyr	Ala	Leu	Ala	Val	Leu	Asp	Asn	Gly	Asp	Pro	Leu	Asn	Asn	
232	105					110					115					120	
234	acc	acc	cct	gtc	aca	ggg	gcc	tcc	cca	gga	ggc	ctg	cgg	gag	ctg	cag	3963
235	Thr	Thr	Pro	Val	Thr	Gly	Ala	Ser	Pro	Gly	Gly	Leu	Arg	Glu	Leu	Gln	
236					125					130						135	
238	ctt	cga	agc	ctc	aca	gag	atc	ttg	aaa	gga	ggg	gtc	ttg	atc	cag	cgg	4011
239	Leu	Arg	Ser	Leu	Thr	Glu	Ile	Leu	Lys	Gly	Gly	Val	Leu	Ile	Gln	Arg	
240				140					145						150		
242	aac	ccc	cag	ctc	tgc	tac	cag	gac	acg	att	ttg	tgg	aag	gac	atc	ttc	4059
243	Asn	Pro	Gln	Leu	Cys	Tyr	Gln	Asp	Thr	Ile	Leu	Trp	Lys	Asp	Ile	Phe	
244			155					160					165				
246	cac	aag	aac	aac	cag	ctg	gct	ctc	aca	ctg	ata	gac	acc	aac	cgc	tct	4107
247	His	Lys	Asn	Asn	Gln	Leu	Ala	Leu	Thr	Leu	Ile	Asp	Thr	Asn	Arg	Ser	
248		170					175					180					
250	cgg	gcc	tgc	cac	ccc	tgt	tct	ccg	atg	tgt	aag	ggc	tcc	cgc	tgc	tgg	4155
251	Arg	Ala	Cys	His	Pro	Cys	Ser	Pro	Met	Cys	Lys	Gly	Ser	Arg	Cys	Trp	
252	185					190				195						200	
254	gga	gag	agt	tct	gag	gat	tgt	cag	agc	ctg	acg	cgc	act	gtc	tgt	gcc	4203
255	Gly	Glu	Ser	Ser	Glu	Asp	Cys	Gln	Ser	Leu	Thr	Arg	Thr	Val	Cys	Ala	
256					205					210					215		
258	ggt	ggc	tgt	gcc	cgc	tgc	aag	ggg	cca	ctg	ccc	act	gac	tgc	tgc	cat	4251
259	Gly	Gly	Cys	Ala	Arg	Cys	Lys	Gly	Pro	Leu	Pro	Thr	Asp	Cys	Cys	His	
260				220					225					230			
262	gag	cag	tgt	gct	gcc	ggc	tgc	acg	ggc	ccc	aag	cac	tct	gac	tgc	ctg	4299
263	Glu	Gln	Cys	Ala	Ala	Gly	Cys	Thr	Gly	Pro	Lys	His	Ser	Asp	Cys	Leu	
264			235					240					245				
266	gcc	tgc	ctc	cac	ttc	aac	cac	agt	ggc	atc	tgt	gag	ctg	cac	tgc	cca	4347
267	Ala	Cys	Leu	His	Phe	Asn	His	Ser	Gly	Ile	Cys	Glu	Leu	His	Cys	Pro	
268		250					255					260					
270	gcc	ctg	gtc	cag	tac	atc	aaa	gct	aac	tcc	aaa	ttc	atc	ggt	atc	acc	4395
271	Ala	Leu	Val	Gln	Tyr	Ile	Lys	Ala	Asn	Ser	Lys	Phe	Ile	Gly	Ile	Thr	
272	265					270					275					280	
274	gag	ctg	cgg	tat	aca	ttc	ggc	gcc	agc	tgt	gtg	act	gcc	tgt	ccc	tac	4443
275	Glu	Leu	Arg	Tyr	Thr	Phe	Gly	Ala	Ser	Cys	Val	Thr	Ala	Cys	Pro	Tyr	
276					285					290					295		
278	aac	tac	ctt	tct	acg	gac	gtg	gga	tcc	tgc	acc	ctc	gtc	tgc	ccc	ctg	4491
279	Asn	Tyr	Leu	Ser	Thr	Asp	Val	Gly	Ser	Cys	Thr	Leu	Val	Cys	Pro	Leu	
280				300					305					310			
282	cac	aac	caa	gag	gtg	aca	gca	gag	gat	gga	aca	cag	cgg	tgt	gag	aag	4539
283	His	Asn	Gln	Glu	Val	Thr	Ala	Glu	Asp	Gly	Thr	Gln	Arg	Cys	Glu	Lys	
284			315					320					325				
286	tgc	agc	aag	ccc	tgt	gcc	cga	gtg	tgc	tat	ggt	ctg	ggc	atg	gag	cac	4587
287	Cys	Ser	Lys	Pro	Cys	Ala	Arg	Val	Cys	Tyr	Gly	Leu	Gly	Met	Glu	His	
288		330					335					340					
290	ttg	cga	gag	gtg	agg	gca	gtt	acc	agt	gcc	aat	atc	cag	gag	ttt	gct	4635
291	Leu	Arg	Glu	Val	Arg	Ala	Val	Thr	Ser	Ala	Asn	Ile	Gln	Glu	Phe	Ala	

RAW SEQUENCE LISTING

DATE: 12/30/2005

PATENT APPLICATION: US/10/560,961

TIME: 09:43:13

Input Set : A:\15450PCT00.ST25.txt

Output Set: N:\CRF4\12302005\J560961.raw

292	345		350		355		360	
294	ggc tgc aag aag atc ttt ggg agc ctg gca ttt ctg ccg gag agc ttt	4683						
295	Gly Cys Lys Lys Ile Phe Gly Ser Leu Ala Phe Leu Pro Glu Ser Phe							
296			365		370		375	
298	gat ggg gac cca gcc tcc aac act gcc ccg ctc cag cca gag cag ctc	4731						
299	Asp Gly Asp Pro Ala Ser Asn Thr Ala Pro Leu Gln Pro Glu Gln Leu							
300			380		385		390	
302	caa gtg ttt gag act ctg gaa gag atc aca ggt tac cta tac atc tca	4779						
303	Gln Val Phe Glu Thr Leu Glu Glu Ile Thr Gly Tyr Leu Tyr Ile Ser							
304			395		400		405	
306	gca tgg ccg gac agc ctg cct gac ctc agc gtc ttc cag aac ctg caa	4827						
307	Ala Trp Pro Asp Ser Leu Pro Asp Leu Ser Val Phe Gln Asn Leu Gln							
308			410		415		420	
310	gta atc cgg gga cga att ctg cac aat ggc gcc tac tcg ctg acc ctg	4875						
311	Val Ile Arg Gly Arg Ile Leu His Asn Gly Ala Tyr Ser Leu Thr Leu							
312	425		430		435		440	
314	caa ggg ctg ggc atc agc tgg ctg ggg ctg cgc tca ctg agg gaa ctg	4923						
315	Gln Gly Leu Gly Ile Ser Trp Leu Gly Leu Arg Ser Leu Arg Glu Leu							
316			445		450		455	
318	ggc agt gga ctg gcc ctc atc cac cat aac acc cac ctc tgc ttc gtg	4971						
319	Gly Ser Gly Leu Ala Leu Ile His His Asn Thr His Leu Cys Phe Val							
320			460		465		470	
322	cac acg gtg ccc tgg gac cag ctc ttt cgg aac ccg cac caa gct ctg	5019						
323	His Thr Val Pro Trp Asp Gln Leu Phe Arg Asn Pro His Gln Ala Leu							
324			475		480		485	
326	ctc cac act gcc aac cgg cca gag gac gag tgt gtg ggc gag ggc ctg	5067						
327	Leu His Thr Ala Asn Arg Pro Glu Asp Glu Cys Val Gly Glu Gly Leu							
328			490		495		500	
330	gcc tgc cac cag ctg tgc gcc cga ggg cac tgc tgg ggt cca ggg ccc	5115						
331	Ala Cys His Gln Leu Cys Ala Arg Gly His Cys Trp Gly Pro Gly Pro							
332	505		510		515		520	
334	acc cag tgt gtc aac tgc agc cag ttc ctt cgg ggc cag gag tgc gtg	5163						
335	Thr Gln Cys Val Asn Cys Ser Gln Phe Leu Arg Gly Gln Glu Cys Val							
336			525		530		535	
338	gag gaa tgc cga gta ctg cag ggg ctc ccc agg gag tat gtg aat gcc	5211						
339	Glu Glu Cys Arg Val Leu Gln Gly Leu Pro Arg Glu Tyr Val Asn Ala							
340			540		545		550	
342	agg cac tgt ttg ccg tgc cac cct gag tgt cag ccc cag aat ggc tca	5259						
343	Arg His Cys Leu Pro Cys His Pro Glu Cys Gln Pro Gln Asn Gly Ser							
344			555		560		565	
346	gtg acc tgt ttt gga ccg gag gct gac cag tgt gtg gcc tgt gcc cac	5307						
347	Val Thr Cys Phe Gly Pro Glu Ala Asp Gln Cys Val Ala Cys Ala His							
348			570		575		580	
350	tat aag gac cct ccc ttc tgc gtg gcc cgc tgc ccc agc ggt gtg aaa	5355						
351	Tyr Lys Asp Pro Pro Phe Cys Val Ala Arg Cys Pro Ser Gly Val Lys							
352	585		590		595		600	
354	cct gac ctc tcc tac atg ccc atc tgg aag ttt cca gat gag gag ggc	5403						
355	Pro Asp Leu Ser Tyr Met Pro Ile Trp Lys Phe Pro Asp Glu Glu Gly							
356			605		610		615	

VERIFICATION SUMMARY

DATE: 12/30/2005

PATENT APPLICATION: US/10/560,961

TIME: 09:43:14

Input Set : A:\15450PCT00.ST25.txt

Output Set: N:\CRF4\12302005\J560961.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date